

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A transponder for an RFID system, comprising:
 - a) a substrate including RF receiving and transmitting means;
 - b) data storage means ~~capable of~~ configured for storing packetized data in a plurality of different standardized and globally addressable data formats transportable in ~~a distributed an information network comprising an Internet;~~
 - c) identifying code in a header in the standardized and globally addressable data format, the code identifying a data structure type and protocol in the stored packetized data of different formats; and
 - d) an indication in the header whether the packetized data should be processed locally at a reader device communicating with said transponder or sent to an external destination for processing upon activation of the transponder by a received transmission.
2. (Previously Presented) The transponder of Claim 1 further comprising:
 - e) signal means responsive to an activation signal for transmitting or receiving and storing packetized data.
3. (Original) The transponder of Claim 2 wherein the data structures are UDP and IP, alone or in combination.
4. (Original) The transponder of Claim 2 wherein the packetized data is at least partly compressed.

5. (Currently Amended) A mobile phone device in a RFID system, comprising:

a) signal apparatus transmitting activation signals to at least one RFID transponder and receiving packetized datagrams in standardized and globally addressable data formats in a plurality of different data structures and protocols transportable in an Internet from the at least one transponder, the packetized datagrams including an indication whether received packetized datagrams should be processed locally at the mobile phone device or sent to an external destination address

b) reading apparatus processing the packetized datagrams from a transponder for delivery to a local application in the mobile phone device and an external destination address in a standardized and globally addressable data format;

c) a communication protocol stack in the mobile phone device routing the packetized datagrams in the standardized and globally addressable data format to at least one of the local application in the mobile device or the external destination address based on the received indication, and

d) reading apparatus processing the packetized datagrams from a the transponder for delivery to a network or the application in a standardized and globally addressable data format.

6. (Currently Amended) The mobile device of Claim 5 further comprising:

e) at least one application stored in the mobile phone device and responsive to the packetized data in the standardized and globally addressable data format.

7. (Original) The mobile device of Claim 5 wherein the packetized datagram is in UDP or IP or combined UDP/IP format including a header with at least partly compressed or shortened or omitted fields.

8. (Original) The mobile device of claim 6 further comprising:
- f) header processing means decompressing or expanding or providing omitted fields in the datagram.
9. (Original) The mobile device of Claim 8 further comprising:
- g) parsing means processing datagrams for transmission to the network.
10. (Original) The mobile device of Claim 7, wherein the packetized datagrams are at least partly compressed.
11. (Currently Amended) A RFID system, comprising:
- a) a transponder ~~capable of~~ configured for containing packetized datagrams in standardized and globally addressable data formats in a plurality of different data structures and protocols and responsive to activation signals, the packetized datagrams including an indication whether received packetized datagrams should be processed locally where received or sent to an external destination address;
- b) a mobile phone device generating the activation signals and sending/receiving the packetized datagrams to/from the transponder;
- c) a communication protocol stack stored in the mobile ~~terminal~~ phone device processing and routing the datagrams;
- d) a network linked to the mobile phone device ~~terminal~~ receiving and transmitting the packetized datagrams; and
- e) a reader device in the mobile phone device ~~terminal~~ processing the packetized datagrams transmitted from the transponder for delivery to and processing by network or an application in the reader in a standardized and globally addressable data format, according to the indication in the packetized datagrams.

12. (Original) The RFID system of Claim 11 wherein the reader is located in the network.

13. (Original) The RFID system of Claim 11 wherein the communication protocol stack checks a checksum in the packetized datagram against the packet contents and notifies the reader the transmission has failed if the checksum is not valid.

14. (Original) The RFID system of Claim 13 wherein the communication protocol stack requests a re-transmission from the transponder if the checksum is not valid.

15. (Previously Presented) The RFID system of Claim 13 wherein the communication protocol stack drops the packetized datagram or notifies an application running in the mobile terminal if a re-transmission is unsuccessful.

16. (Original) The RFID system of Claim 13 wherein the communication protocol stack transmits the packetized datagram to an application running in the terminal or to an application running in the network.

17. (Original) The RFID system of Claim 13 wherein the communication protocol stack parses a header in the packetized datagram and routes the packetized datagram to a destination identified in the header if a checksum in the packetized datagram is valid.

18. (Original) The RFID system of Claim 13, wherein the packetized datagrams are at least partly compressed.

19. (Previously Presented) A method for routing packetized data between a data carrier and a destination address comprising:

a) receiving and sending a data packets in a standardized and globally addressable formats in a plurality of different data structures and protocols including a header and a payload from and to the data carrier;

b) identifying the format among the different formats of the data packet via a code in the header including an indication whether the data packet should be processed locally at a reader device communicating with a transponder or sent to an external destination for processing;

c) processing the data packet according to the identified standardized and globally addressable format after validation of the header; and

d) routing the processed data packet directly to a destination address defined in the standardized and globally addressable format or to a local address of an application running in the a receiver, according to the indication in the data packet.

20. (Previously Presented) The method according to claim 19, wherein the data packet comprises an identification data, a header data and a payload data, packetized according to any one of several standardized and globally addressable formats.

21. (Previously Presented) The method according to claim 19 wherein the data packet without identification data is transportable in an information network.

22. (Original) The method according to claim 19, wherein the data carrier is an RFID tag.

23. (Previously Presented) The method according to claim 19, wherein the destination address is a multicast address of a personal area network internet.

24. (Original) The method according to claim 20, wherein the header data is UDP header data.

25. (Original) The method according to claim 20, wherein the header data is at least partly in compressed form.

26. (Original) The method according to claim 25, wherein the processing comprises decompressing the received header data.

27. (Original) The method according to claim 20 wherein the payload data is at least partly in compressed form.

28. (Original) The method according to claim 20 wherein the payload data is in uncompressed form.

29. (Previously Presented) The method according to claim 20 wherein the header data includes a looped-back address if the destination is the receiver.

30. (Previously Presented) The method according to claim 19 wherein the routed packets can be directed via an IP stack to a network or an application within the device receptive to the standardized and globally addressable format.

31. (Previously Presented) The method according to claim 30, wherein the network can be an external network (e.g. an Internet) or a local network (such as a personal area network, or a local area network).

32. (Currently Amended) A method for writing a packetized data to a data carrier, where the data carrier is an RFID tag, comprising;

determining if a tag is writeable and, if so, alerting an application program executable in a mobile phone device or a network to prepare to transmit data after a reader completes a handshake with the tag;

transmitting the data to the reader from the application program in the mobile phone device or the network for retransmission of the data to the tag in a format that indicates the location for processing the data at the reader or an alternate external destination;

appending a RFID header to the data;

receiving and storing the transmitted data in the tag from the application or network which ~~may include over-~~ writes writing the data in an erasable read-only memory included in the tag; and

transmitting an acknowledgment signal to the application via the reader.

33. (Currently Amended) A system for routing packetized data comprising:

a) at least one data ~~carrier capable of~~ configured for having at least one data packet embedded therein in standardized and globally addressable format, in a plurality of different data structures and protocols, the data packet including an indication whether the data packet should be processed locally at a mobile phone device or sent to an external destination address;

b) a data receiving (reading) device or data sending (writing) device in the mobile phone device for receiving or sending the at least one embedded data packet from the said at least one data carrier;

c) a data routing device in the mobile phone device including an IP stack connectable to the data receiving device for routing the received data packet directly to a destination address, via the IP stack according to the destination address in the data packet; and

d) an application at a local address in the data routing device receptive to a selected standardized and globally addressable format for receiving and processing the routed received data packet, according to the indication in the data packet.

34. (Original) A system of Claim 33, wherein the at least one data packet is at least partly compressed.

35. (Previously Presented) A system of Claim 33, wherein the at least one data packet is transportable in an Internet.

36. (Currently Amended) A computer readable medium for storing program code, executable in a computer system, for routing packetized data between a data carrier and destination address, the medium comprising:

a) program code ~~capable of~~ configured for sending data packets in a standardized and globally addressable formats of different data structures and protocols including a header and a payload from and to the data carrier;

b) program code for identifying ~~a~~ the format among the different formats of the data packet via a code in the header including an indication whether the data packet should be processed locally at a reader device communicating with a transponder or sent to an external destination for processing;

c) program code for processing the data packet according to the identified standardized and globally addressable format; and

d) program code for routing the processed data packet to a destination address defined in the standardized and globally addressable format and according to the indication in the data packet, without alteration of the data packet.

37. (Currently Amended) A transponder for an RFID system, comprising:

a) a substrate including RF receiving and transmitting means;

b) data storage means ~~capable of~~ configured for storing packetized data in standardized and globally addressable data formats, in a plurality of different data structures and protocols transportable in a distributed information network; and

c) identifying code in the standardized and globally addressable format identifying the data structure and protocol, the packetized data including an indication whether received packetized data should be processed locally at a mobile phone device or sent to an external destination address upon activation of the transponder by a received transmission.

wherein the transmitting means transmits the packetized data to an application for routing without alteration of the packet, according to the indication in the packetized data.

38. (Currently Amended) A mobile phone device in a RFID system, comprising:

a) signal apparatus ~~capable of~~ configured for transmitting activation signals and sending/receiving packetized datagrams in standardized and globally addressable data formats, in a plurality of different data structures and protocols, the packetized datagrams including an indication whether received packetized data should be processed locally at a device or sent to an external destination address and transportable in a distributed information network comprising an Internet to/from at least one transponder;

b) a communication protocol stack processing and routing packetized datagrams within the mobile phone device or to the network;

c) stored programs operating the mobile phone device in the RFID system and implementing communications with a the network;

d) reading apparatus processing the packetized datagrams from a transponder for delivery to a the network or application, according to the indication in a

packetized datagram, without alteration of the packetized datagrams, wherein the packetized datagram is in UDP or IP or combined UDP/IP format including a header; and

e) header processing means decompressing or expanding or providing omitted fields in the packetized datagram.

39. (Currently Amended) A RFID system, comprising:

a) a transponder ~~eapable of~~ configured for containing packetized datagrams in selectable standardized and globally addressable data formats in a plurality of different formats transportable in a network and responsive to activation signals, the packetized datagrams including an indication whether received packetized data should be processed locally where received or sent to an external destination address;

b) a mobile phone device generating the activation signals and sending/receiving the packetized datagrams to/from the transponder;

c) a communication protocol stack stored in the mobile phone device processing and routing the packetized datagrams;

d) a network linked to the mobile phone device terminal receiving and transmitting the packetized datagrams; and

e) a reader in the mobile phone device terminal processing the packetized datagrams transmitted from the transponder for delivery to the network or a local application in the mobile phone device without alteration of the packetized datagrams wherein the communication protocol stack parses a header in the packetized datagram and routes the packetized datagram to a destination, according to an indication in the packetized datagrams if a checksum in the packetized datagram is valid.

40. (Previously Presented) A mobile phone device in a RFID system, comprising:

- a) signal apparatus transmitting activation signals and sending/receiving packetized datagrams in a plurality of different standard addressable global formats including, an indication whether the packetized datagrams should be processed locally where received or sent to an external destination address;
- b) a communication protocol stack in a mobile phone device processing and routing the packetized datagrams within the mobile phone device or in a network;
- c) stored programs operating the mobile phone device in the RFID system and implementing communications with the network and at least one transponder; and
- d) reading apparatus processing the packetized datagrams from a transponder for delivery to the network or to an application in the mobile phone device, according to the indication in the packetized datagram.

41. (Previously Presented) The mobile device of claim 40 wherein the stored programs include an application for processing failed delivery of packetized delivery.

42. (Canceled)

43. (NEW) Apparatus, comprising:

a processor; and

a RFID communications interface coupled to the processor for communicating with at least one RFID transponder and receiving at least one data packet in a standardized and globally addressable data format including a header and a payload ;

wherein the processor is configured to:

- a) identifying the data format of the at least one data packet via a code in the header including an indication whether the at least one data packet should be processed locally at a reading device communicating with a transponder or sent to an external destination for processing;

b) processing the at least one data packet according to the identified standardized and globally addressable format after validation of the header; and

d) routing the processed at least one data packet directly to a destination address defined in the standardized and globally addressable format or to a local address of an application running in the device, according to the indication in the data packet.

44. (NEW) The Apparatus of claim 43 wherein the data packet is processed for distribution in an information network.